Serial Number: 09/754,650 Filing Date: January 3, 2001

Title: INTERACTIVE CONTENT DELIVERY METHODS AND APPARATUS

## **IN THE CLAIMS**

Please amend the claims as follows.

- 1. (Currently Amended) A system for providing interactive content comprising:

  hardware adapted to receive one or more first video streams that include video

  data and an encrypted interactive content code, wherein the encrypted

  interactive content code is encrypted in a manner to prevent ad skipping,

  and wherein the hardware is further to produce a second video stream;

  an interactive content code detector adapted to detect an interactive content code

  identified in the encrypted interactive content code, and to produce a

  control signal responsive to detecting the interactive content code; and

  a data insertion unit adapted to receive the control signal and to insert interactive

  content into the second video stream responsive to information contained

  in the control signal, resulting in a third video stream.
- 2. (Previously Presented) The system of claim 1 wherein the data insertion unit is positioned to insert interactive content into the second video stream prior to the third video stream being transmitted to a transmission source, causing the interactive content to remain in the third video stream upon transmission.
- 3. (Previously Presented) The system of claim 1 wherein a video stream generator generates the first video stream, and the interactive content code detector is coupled to an output of the video stream generator.
- 4. (Previously Presented) The system of claim 1 wherein the encrypted interactive content code is received in a different stream from a stream used to carry the video data.
- 5. (Original) The system of claim 1 in which the interactive content code detector and the data insertion unit are coupled to a same point in the transmission path.

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- (Original) The system of claim 5 wherein the interactive content code is a universal 6. resource locator and the data insertion unit inserts an interactive content corresponding to the universal resource locator.
- (Previously Presented) The system of claim 1, wherein the encrypted interactive content 7. code is located in a vertical blanking interval of the one or more first video streams, and wherein the interactive content code detector includes a vertical blanking interval line reader.
- (Currently Amended) A method for providing interactive content in a broadcast facility 8. that transmits a video broadcast stream containing video along a transmission path for delivery to end users and contains equipment that may corrupt interactive content, the method comprising: encrypting an interactive content code, resulting in an encrypted interactive content code wherein the interactive content code is encrypted in a manner to prevent ad skipping;
  - inserting the encrypted interactive content code into a first video stream, resulting in a second video stream with embedded interactivity, wherein the encrypted interactive content code specifies an interactive content to accompany a video broadcast;
  - processing the second video stream, to produce a third video stream; and inserting an interactive content corresponding to the interactive content code into the third video stream, to produce a fourth video stream, which includes the interactive content and the encrypted interactive content code.
- (Original) The method of claim 8 wherein inserting an interactive content further 9. comprises inserting an interactive content corresponding to the interactive content code at a point in the transmission path after a last point in the transmission path where the interactive content may be corrupted.

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10. (Previously Presented) The method of claim 8, further comprising reading the interactive content code at a point in the transmission path prior to an interactive content in the second video stream being corrupted.

- 11. (Previously Presented) The method of claim 8 wherein the embedded interactive content code is inserted into a region of the second video stream that is preserved by the broadcast facility.
- 12. (Previously Presented) The method of claim 8, further comprising reading the interactive content code, wherein the interactive content is inserted into the third video stream at a same point in the transmission path at which the interactive content code is read.
- 13. (Previously Presented) The method of claim 12, further comprising reading the interactive content code, wherein the interactive content code is read at a point in the transmission path after which broadcast facility equipment that may corrupt an interactive content is coupled to the transmission path.
- 14. (Currently Amended) A method for providing interactive content in a broadcast facility that transmits a video broadcast stream containing video for delivery along a transmission path to end users and contains equipment that may corrupt interactive content, the method comprising:

  encrypting an interactive content code, resulting in an encrypted interactive content code wherein the interactive content code is encrypted in a manner to prevent ad skipping;
  - in a second video stream with embedded interactivity, wherein the interactive content code specifies an interactive content to accompany a video broadcast, and wherein the encrypted interactive content code is inserted into a region of the second video stream that is preserved by the broadcast facility;

processing the second video stream, to produce a third video stream; and

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inserting an interactive content corresponding to the interactive content code into the third video stream at a point in the transmission path after a point in the transmission path where broadcast facility equipment that may corrupt the interactive content is coupled to the transmission path, to produce a fourth video stream.

- (Previously Presented) The method of claim 14 wherein inserting the encrypted 15. interactive content code further comprises inserting a plurality of encrypted interactive content codes in different regions of the second video signal.
- (Previously Presented) The method of claim 15 wherein at least one of the different 16. regions is preserved by at least one local subsystem.
- (Currently Amended) A method for providing interactive content in a broadcast facility 17. that transmits a video stream containing video for delivery along a transmission path to end users, the method comprising:

inserting an encrypted reference to an interactive content into a region of a first video stream, wherein the encrypted reference is encrypted in a manner to prevent ad skipping, and wherein the region is preserved by the broadcast facility, resulting in a second video stream with embedded interactivity; processing the second video stream, to produce a third video stream; and inserting an interactive content corresponding to the encrypted reference into the third video stream, to produce a fourth video stream.

18. (Previously Presented) The method of claim 17 wherein inserting the encrypted reference further comprises inserting an encrypted Universal Resource Locator, which includes a link to an interactive content, into the region of the first video stream that is preserved by the broadcast facility.

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19. (Currently Amended) A system for providing interactive content comprising: hardware adapted to receive a first video stream that includes video data and one or more encrypted interactive content codes, and to produce a second video stream, wherein the encrypted interactive content codes are encrypted in a manner to prevent ad skipping;

- an interactive content code detector, coupled to the first video stream, adapted to detect one or more interactive content codes identified within the one or more encrypted interactive content codes and to produce a control signal responsive to detecting an interactive content code; and
- a data insertion unit, coupled to the interactive content code detector, adapted to receive the control signal and to insert interactive content into the second video stream responsive to information contained in the control signal, resulting in a third video stream to be transmitted to one or more local subsystems, wherein the data insertion unit is positioned to insert interactive content into the second video stream prior to the third video stream being transmitted to a transmission source, causing the interactive content to remain in the third video stream upon transmission.
- 20. (Currently Amended) A system for providing interactive content comprising: local equipment, adapted to receive one or more first signals from a broadcast facility, wherein the one or more first signals include video data and one or more encrypted interactive content codes, wherein the one or more encrypted interactive content codes are encrypted in a manner to prevent ad skipping, and wherein the local equipment is further to produce a first video stream;
  - an interactive content detection unit adapted to detect an interactive content code identified within an encrypted interactive content code and to transmit a control signal responsive to detecting the interactive content code; and

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a data insertion unit, coupled to the interactive content code detector, adapted to receive the control signal and to insert interactive content into the first video stream responsive to information contained in the control signal, resulting in a second video stream.

- 21. (Previously Presented) The system of claim 20 wherein the data insertion unit is positioned to insert interactive content into the first video stream prior to the second video stream being transmitted to customer premise equipment, causing the interactive content to remain in the second video stream upon transmission.
- 22. (Original) The system of claim 20 in which the interactive content code detector and the data insertion unit are coupled to a same point in the transmission path.
- 23. (Original) The system of claim 20 wherein the interactive content code is a universal resource locator and the data insertion unit inserts an interactive content corresponding to the universal resource locator.
- 24. (Original) The system of claim 20, wherein the interactive content code detector is a vertical blanking interval reader.
- 25. (Currently Amended) A method of ensuring reliable delivery of interactive content comprising:

inserting a plurality of encrypted interactive content codes into different regions of data in a video stream to be broadcast to a plurality of local subsystems, wherein the interactive content codes correspond to an interactive content to be inserted into the video stream, wherein the plurality of encrypted interactive content codes is encrypted in a manner to prevent ad skipping, and wherein each region of data is preserved by at least one local subsystem.

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(Currently Amended) A method of ensuring reliable delivery of interactive content 26. comprising:

> inserting an encrypted interactive content code into a closed caption region of a video stream, wherein the interactive content code corresponds to an interactive content to be inserted into the video stream, wherein the encrypted interactive content code is encrypted in a manner to prevent ad skipping, and wherein the closed caption region is preserved by at least one local subsystem.

27. (Currently Amended) A method of increasing a reliability for delivery of interactive content, the method comprising:

> inserting an encrypted interactive content code into a first component of a first signal alternate to a second component, which is used to convey interactive content, wherein the encrypted interactive content code is encrypted in a manner to prevent ad skipping;

processing the first signal, to produce a second signal;

detecting an interactive content code identified by the encrypted interactive content code in the first signal; and

inserting interactive content corresponding to the interactive content code into the second signal, to produce a third signal.

(Previously Presented) The method of claim 8, wherein encrypting the interactive content 28. code comprises disarranging elements of the interactive content code to produce a scrambled interactive content code.